

Application No. 10/775,406
Amendment "A" dated March 13, 2006
Reply to Office Action mailed December 13, 2005

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) In a magnetic storage device, a method of calibrating motion of a transducer in a vertical direction, the transducer being bi-directionally movable with respect to the surface of a rotatable magnetic medium, the method comprising:

determining an infinite resistance value of a current passed through the transducer at a first vertical position with respect to the magnetic medium surface;

determining a contact resistance value of the current passed through the transducer at a second vertical position with respect to the magnetic medium surface, the second position corresponding to physical contact between the magnetic medium surface;

iteratively adjusting the position of the transducer to a position between the first and second vertical positions while causing the transducer to pass over a plurality of ridges defined on the magnetic medium surface and measuring a resistance value of the current passed through the transducer for each iteration; and

determining the relationship between each vertical position and its corresponding resistance value.

2. (Original) A method of calibrating as defined in claim 1, wherein the transducer is located in a transducer body, and wherein the transducer is selectively moved to each vertical position by first and second bias inputs to the transducer body.

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3. (Original) A method of calibrating as defined in claim 2, wherein the first and second bias inputs are electrical currents.

4. (Original) A method of calibrating as defined in claim 2, wherein the first and second bias inputs are electrical voltage signals.

5. (Original) A method of calibrating as defined in claim 1, wherein iteratively adjusting the position of the transducer further comprises iteratively adjusting the position of the transducer at least three times after detecting a change in the resistance value during a prior iteration.

6. (Original) A method of calibrating as defined in claim 1, wherein the infinite and contact resistance values are measured when the magnetic medium surface is stationary.

7. (Original) A method of calibrating as defined in claim 1, wherein the iterative resistance values are measured when the magnetic medium surface is rotating.

8. (Original) A method of calibrating as defined in claim 1, wherein the method of calibrating is performed at multiple locations on the magnetic medium surface having different radial distances from the center of the magnetic medium surface.

9. (Withdrawn)

10. (Withdrawn)

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11. (Withdrawn)

12. (Withdrawn)

13. (Withdrawn)

14. (Withdrawn)

15. (Withdrawn)

16-21. (Canceled)

22. (Withdrawn)

23. (Withdrawn)

24. (Withdrawn)

25. (Withdrawn)

26. (Original) In a magnetic storage device, a method of calibrating motion of a transducer, the transducer being positioned in a transducer body that is bi-directionally movable in vertical and lateral directions with respect to the surface of a rotatable magnetic medium, the method comprising:

by the transducer body, positioning the transducer at a first vertical position with respect to the magnetic medium surface and determining an infinite resistance value of a current passed through the transducer;

by the transducer body, contacting the magnetic medium surface with the transducer at a second vertical position and determining a contact resistance value of the current passed through the transducer; and

iteratively adjusting first and second bias inputs to the transducer body to position the transducer at positions between the first and second vertical positions while causing

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the transducer to pass over a plurality of ridges defined on the magnetic medium surface and measuring a resistance value of the current passed through the transducer for each iteration.

27. (Original) A method of calibrating motion of a transducer as defined in claim 26, further comprising:

determining the relationship between each vertical position and its corresponding resistance value.

28. (Original) A method of calibrating motion of a transducer as defined in claim 27, wherein iteratively adjusting first and second bias inputs further comprises:

iteratively adjusting the first and second bias inputs, wherein for each iteration the magnitude of the first bias input equals the magnitude of the second bias input, and wherein the sum of the magnitudes of the first and second bias inputs varies with each iteration.

29. (Withdrawn)

30. (Withdrawn)

31. (Withdrawn)

32. (Withdrawn)

33. (Withdrawn)

34. (Withdrawn)

35. (Withdrawn)